

SEP 13 2004

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): DAVID OLSEN

Confirmation No.: 6975

Application No.: 10/665,752

Examiner: NGUYEN, J

Filing Date: Sep 19, 2003

Group Art Unit: 2861

Title: FLUID INTERCONNECT IN A REPLACEABLE INK RESERVOIR FOR PIGMENTED INK

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in triplicate is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 19, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$110.00
() two months	\$420.00
() three months	\$950.00
() four months	\$1480.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: Sep 9, 2004
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Number of pages:

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Respectfully submitted,

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Date: Sep 9, 2004

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re Application of:

Serial No. 10/665,752

Filed: 09/19/2003

For: FLUID INTERCONNECT IN A
REPLACEABLE INK RESERVOIR
FOR PIGMENTED INK

Art Unit: 2861

Examiner: Nguyen, J.

BRIEF ON APPEAL FOR APPELLANT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)	Art Unit: 2861
David Olsen)	Examiner: Nguyen, J.
Serial No. 10/665,752)	
Filed: 09/19/2003)	
For: FLUID INTERCONNECT IN A)	
REPLACEABLE INK RESERVOIR)	
FOR PIGMENTED INK)	

BRIEF ON APPEAL FOR APPELLANT

Commissioner for Patents
Washington, D.C. 20231

Sir:

This appeal is taken from the Office's final rejection of Claims 1-3, 5-38 mailed April 5, 2004, in the subject application.

I. REAL PARTY IN INTEREST.

The real party in interest is the assignee, Hewlett-Packard Development Company, L.P.

II. RELATED APPEALS AND INTERFERENCES.

There are no related appeals or interferences.

III. STATUS OF ALL THE CLAIMS.

Claims 1-38 were filed with this application. During the course of prosecution before the Primary Examiner, Claim 4 was cancelled. Claims 1-3 and 5-38 in their present, amended form appear in Appendix 1. These claims are the only claims pending in this case.

IV. STATUS OF ALL AMENDMENTS FILED SUBSEQUENT TO FINAL REJECTION.

The Advisory Action mailed June 22, 2004 indicates that the amendment filed June 7, 2004 would be entered for purposes of appeal, and overcomes the rejection under 35 USC 112 set out in the final rejection. These amendments are reflected in the claim listing of Appendix 1.

V. SUMMARY OF THE INVENTION.

The page and line numbers referred to herein are to the specification; reference characters are found in the drawing.

Independent Claim 1 is drawn to an ink reservoir adapted for holding a supply of pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, comprising:

- a containment vessel **[34, FIGS. 7-8];**

- a supply of pigmented liquid ink disposed in the containment vessel;

- a body of reservoir material disposed in the vessel **[92, FIGS 7-8;1:11 to 11:4];**

- a fluid interconnect opening formed in the vessel **[88, FIGS. 7-8; 12:9 and 17:4-23];**

- a screen **[90]** disposed in the containment vessel and across the interconnect opening and in contact with the body of reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough **[12:7-12; 17:24 to 19:21].**

Independent Claim 8 is drawn to a method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between a fluid interconnect inlet port and the printhead, the method comprising:

- providing the ink container with an interconnect outlet port **[88, FIGS. 7-8; 12:9 and 17:4-23],** and with a body of reservoir material **[92,**

FIGS 7-8; 11:11 to 11:4] disposed in the container, the ink container further including a screen **[90]** disposed across the interconnect outlet port and in contact with the reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough **[12:7-12; 17:24 to 19:21]**;

bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port **[18:29 to 19:1]**;

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead **[11:5-18; 14:23 to 15:11]**.

Claim 14 is drawn to an inkjet printing system, comprising:

an inkjet print cartridge **[16; FIG. 2]** comprising an inkjet printhead **[17; FIG. 2]**;

a replaceable ink container **[12; FIG. 2]** for holding a primary supply of pigmented liquid ink, the ink container comprising a containment vessel **[34; FIG. 4]**, a body of reservoir material **[94; FIGS. 8-9]** disposed in the vessel, a fluid interconnect opening formed in the vessel **[88, FIGS. 7-8; 12:9 and 17:4-23]**, and a screen disposed in the containment vessel and across the interconnect opening and in contact with the body of reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough **[12:7-12; 17:24 to 19:21]**;

a receiving station **[14; FIG. 4]** for mounting the print cartridge and the ink container **[10:3-8]**;

a fluid interconnect structure **[36]** for establishing a fluid path between the ink container and the print cartridge when the ink container and the print cartridge are installed in the receiving station, the fluid interconnect structure including an interconnect tower having at a distal end thereof a fluid interconnect inlet port **[36A]**, and wherein the fluid interconnect opening and the screen are brought into contact with the fluid interconnect inlet port when the ink container is installed in the receiving station **[FIGS. 8-9; 12:9-11; 18:29 to 19:21]**.

Independent Claim 21 is drawn to a method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles

of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between the ink container and the printhead, the fluid interconnect having a fluid interconnect inlet port, the method comprising:

providing the ink container with an interconnect outlet port [88, **FIGS. 7-8; 12:9 and 17:4-23**] and with a body of reservoir material disposed in the container [92, **FIGS 7-8;1:11 to 11:4**], the body of reservoir material having a region adjacent to and in contact with a screen [90] disposed within the container and across the interconnect outlet port, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough [12:7-12; 17:24 to 19:21];

bringing the screen into contact with the fluid interconnect inlet port, thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the fluid interconnect outlet port [12: 5-11; 18:29 to 19:1];

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead [14:23 to 15:11].

Claim 27 is drawn to a method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between the ink container and the printhead, the fluid interconnect having a fluid interconnect inlet port, the method comprising:

providing the ink container with an interconnect outlet port [88, **FIGS. 7-8; 12:9 and 17:4-23**], and with a body of reservoir material disposed in the container [92, **FIGS 7-8;1:11 to 11:4**], the ink container further including an outlet screen [90] disposed across the interconnect outlet port and in contact with the reservoir material, the outlet screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough [12:7-12; 17:24 to 19:21];

providing the fluid interconnect with an inlet screen [36B; **FIGS. 8-9**] disposed across the interconnect inlet port, the inlet screen having a pore size larger than the pore size of the outlet screen and large enough

to avoid clogging from dried ink pigments under typical use conditions **[19:6-14]**;

bringing the outlet screen into contact with the fluid interconnect inlet port **[FIG. 9; 19:29-32]**; and

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead **[14:23 to 15:11]**.

Claim 32 is drawn to an ink supply system for an inkjet printing system with an inkjet print cartridge, comprising:

a replaceable ink container **[12; FIG. 2]** for holding a supply of pigmented liquid ink, the ink container comprising a containment vessel, the containment vessel having an interconnect opening **[88, FIGS. 7-8; 12:9 and 17:4-23]**;

a screen **[90]** disposed in the containment vessel and across the interconnect opening, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow dispersed colorant particles of the pigmented liquid ink to pass there-through **[12:7-12; 17:24 to 19:21]**;

a body of reservoir material disposed in the containment vessel **[92, FIGS 7-8;1:11 to 11:4]**, the body of reservoir material having a region adjacent to and in contact with the screen **[FIGS. 8-9]**;

a receiving station **[14; FIG. 4]** for mounting the ink container;

a fluid interconnect structure **[36]** for establishing a fluid path from the ink container to the ink jet cartridge when the ink container is installed in the receiving station, the fluid interconnect structure including an interconnect tower having a distal end with a fluid interconnect inlet port **[36A]**;

wherein when the ink container is installed in the receiving station, the fluid interconnect inlet port contacts the screen thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the screen **[12: 5-11; 18:29 to 19:1]**.

Dependent Claim 6 depends from Claim 1, and further recites that the screen is fabricated of a polyester mesh **[17:24-27]**. Dependent Claims 19 and 37 add a similar limitation.

VI. CONCISE STATEMENT OF THE ISSUES PRESENTED FOR REVIEW.

The issues presented on appeal are (i) whether Claims 1-3, 5, 7-18, 20-36 and 38 are unpatentable under 35 USC 103(a) over Soga et al. ("Soga") (US 6,082,852) in view of Ma et al. ("Ma") (US 5,085,698), and (ii) whether Claims 6, 19, 37 are unpatentable under 35 USC 103(a) over Soga in view of Ma and further in view of Dietl et al (US 5,085,698).

VII. GROUPING OF CLAIMS FOR EACH GROUND OF REJECTION WHICH APPELLANT CONTESTS.

The claims on appeal do not stand or fall together.

VIII. ARGUMENT.

A. The Requirements of 35 USC §103.

35 USC §103 requires that the invention as a whole must be considered in obviousness determinations. The invention as a whole embraces the structure, its properties and the problem it solves. In re Wright, 6 USPQ2d 1959, 1961 (Fed.Cir. 1988).

In order to provide a basis for obviousness, the applied references must be related to the subject matter of the invention in issue and must suggest (expressly or by implication) the combination of the invention in issue. In re Sernaker, 702 F.2d 989 (Fed.Cir. 1983).

Further, the combined teachings of the prior art references should suggest the advantage of combining the teachings. In re Sernaker, supra, at 995-996.

In determining the combined teachings of the applied references, the subject matter of the claimed invention must not be utilized to provide hindsight reconstruction of the applied references. As stated by the Court of Customs and Patent Appeals In re Shuman, 361 F.2d 1008 (CCPA 1966):

It is impermissible to first ascertain factually what appellant did and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct appellants' invention from such prior art. 361 F.2d at 1012.

The Examiner bears the burden of establishing a prima facie case of obviousness based on the prior art. "... 'This burden can be satisfied only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.' The patent applicant may then attack the Examiner's prima facie determination as improperly made out, or the applicant may present objective evidence tending to support a conclusion of nonobviousness." In re Fritch, 23 USPQ 1780, 1783 (Fed.Cir. 1992).

Appellant submits that the Primary Examiner has not established prima facie that the claimed invention would have been obvious in view of the applied references, and that the references do not teach or suggest the claimed invention.

B. A Prima Facie Case of Obviousness Has Not Been Established.

For purposes of this appeal, appellants are content to stand on the differences between the claimed invention and the applied references discussed below, because these differences are sufficient to establish that a prima facie case of obviousness has not been established, and the applied references do not teach or suggest appellants' invention. Appellants do not concede, however, that other differences do not exist.

Claims 1-3, 5, 7-18, 20-36 and 38 stand rejected as being unpatentable over Soga et al. ("Soga") in view of Ma et al. ("Ma"). This ground of rejection should be reversed on the grounds that a prima facie case of obviousness has not been established, and the applied references do not teach or suggest the claimed subject matter.

1. Claims 1-3, 5-7:

A prima facie case of obviousness has not been established with respect to Claims 1-3 and 5-7. Neither Soga nor Ma, alone or in combination, disclose, teach or suggest each and every limitation of any of Claims 1-3 or 5-7, including at least:

“ . . . the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough.”

as recited in Claim 1, from which Claims 2, 3 and 5-7 depend. Moreover, the Examiner made no express finding that either Soga or Ma disclose, teach or suggest the quoted limitations. In Section 5 of the Office Action, at pages 3-4, the Examiner lists a number of “claimed features” that the Examiner states are allegedly disclose, taught or suggested by Soga - the list does not include the limitation of Claim 1 quoted above. Nor does the Examiner cite or refer to any other reference as allegedly showing the limitation quoted above. Ma is cited only for its disclosure of pigmented inks for ink jet printers. Accordingly, a prima facie case of obviousness has not been established with respect to Claims 1-3 or 5-7, and the references do not teach or suggest the subject matter of these claims.

Soga does not describe pigmented inks or problems associated with the use of pigmented inks.

Ma describes pigmented inks for an ink jet printer, but does not address problems associated with using pigmented inks in an inkjet printer. Absent some teaching or suggestion as to why one of ordinary skill in the art would have used the ink in Ma in an ink jet printer as described in Soga, there appears no reason to suggest the modification of Soga with the pigmented ink as described in Ma.

2. Claims 8-13 and 27-31:

The Examiner has failed to establish a prima facie case of obviousness with respect to Claims 8-13. Neither Soga nor Ma, alone or in combination, disclose, teach or suggest at least the following limitations of Claims 8-14:

“ . . . providing the ink container with an interconnect outlet port, and with a body of reservoir material disposed in the container, the ink container further including a screen disposed across the interconnect outlet port and in contact with the reservoir material, the screen having a

pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough;

bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port”

as recited in Claim 8.

Appellant respectfully submits that a prima facie case of obviousness has not been established with respect to Claims 27-31. Moreover, neither Soga nor Ma, alone or in combination, disclose, teach or suggest each and every limitation of any of Claims 27-31. For example, neither Soga nor Ma disclose, teach or suggest at least the following limitations of Claims 27-31:

“ . . . an outlet screen disposed across the interconnect outlet port and in contact with the reservoir material”

and

“ . . . bringing the outlet screen into contact with the fluid interconnect inlet port”

as recited in Claim 27.

Moreover, the Examiner made no express finding that either Soga or Ma disclose, teach or suggest the above-quoted limitations. The Examiner merely stated that, “the steps recited in the method claims are considered inherent functions associated with the aforementioned structure.” Appellant respectfully disagrees.

“[B]ringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port” is not an inherent function associated with any of those features and it is not obvious to combine the quoted limitations with the other limitations of claim 8. Soga, for example, shows several embodiments in FIGS. 3 through 5, which have ink holding members 3a, a meniscus member 5a, an ink passing member 7a and a joint pipe 12a. 9:49-10:33. In each of those embodiments, the joint pipe 12a is separated from the meniscus member 5a by an ink passing member 7a. Accordingly, the Examiner’s statement that the steps recited in the method claims are inherent functions associated with the aforementioned structures is incorrect. For example, the limitation of “bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port” is not an inherent function associated with the aforementioned structure.

Moreover, Soga does not disclose the limitations of “providing the ink container with an interconnect outlet port, and with a body of reservoir material disposed in the container, the ink container further including a screen disposed across the interconnect outlet port and in contact with the reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough” and the limitation “bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port” in the claimed combination.

As discussed above, Soga discloses several embodiments with ink holding members 3a, a meniscus member 5a, an ink passing member 7a and a joint pipe 12a (9:49-10:33), but which have a joint pipe 12a is separated from the meniscus member 5a by an ink passing member 7a. Other embodiments, however, have an intermediate chamber 16b (which does not include an ink holding member 3a) and a “second meniscus forming member 17b” below the intermediate chamber 16b. FIG. 14, for example, shows a “second meniscus forming member 17b” below an intermediate chamber 16b (which does not include an ink holding member 3a). The accompanying text (15:51-53) states that the “second meniscus forming member 17b of the ink tank 1b is made to directly contact with the filter 22b of the print head 3b, to thereby form an ink passage.”

Appellant therefore respectfully submits that Soga as allegedly modified by Ma does not disclose, teach or suggest each and every one of the claimed limitations in the claimed combinations. In addition, the Appellant respectfully submits that the Examiner failed to make any express finding with respect to which reference and where in those references, the claimed limitations are disclosed, taught or suggested and did not establish a prima facie case of obviousness. The rejections of Claims 8-13 and 27-31 should be reversed.

3. Claims 14-20:

Appellant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness with respect to any of Claims 14-20. Neither Soga nor Ma, alone or in combination, disclose, teach or suggest each and every limitation of any one of Claims 14-20. For example, neither Soga nor Ma disclose at least the following limitations of claims 14-20:

“ . . . a screen disposed in the containment vessel and across the interconnect opening”

and

“ . . . the fluid interconnect opening and the screen is brought into contact with the fluid interconnect inlet port when the ink container is installed in the receiving station.”

as recited in Claim 14. Neither Soga nor Ma disclose, teach or suggest the quoted limitations in the claimed combination, for reasons given above with respect to Claims 8-13. Moreover, Appellant respectfully submits that the Examiner made no express findings with respect to either one of the quoted limitations. The rejection of these claims should be reversed.

4. Claims 21-26 and 32-38:

Appellant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness with respect to Claims 21-26. Neither Soga nor Ma, alone or in combination, disclose each and every limitation of any one of claims 21-26. For example, neither Soga nor Ma disclose, teach or suggest at least the following limitations of claims 21-26:

“ . . . the body of reservoir material having a region adjacent to and in contact with a screen disposed within the container and across the interconnect outlet port”

and

“ . . . bringing the screen into contact with the fluid interconnect inlet port, thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the fluid interconnect outlet port”

as recited in Claim 21. Neither Soga nor Ma disclose, teach or suggest at least the following limitations of Claims 32-38:

“ . . . the body of reservoir material disposed in the containment vessel, the body of reservoir material having a region adjacent to and in contact with the screen”

and

“ . . . the fluid interconnect inlet port contacts the screen thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the screen.”

as recited in Claim 32.

Appellant respectfully submits that the Examiner has not established a prima facie case of obviousness with respect to Claims 21-26 and 32-38 at least for reasons similar to those given above with respect to Claims 8-13 and 27-31. In addition, the Examiner has also failed to make express findings with respect to the limitation of “compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the fluid interconnect outlet port.” Moreover, neither one of Soga and Ma, alone or in combination, disclose, teach or suggest this limitation. Nor has the Examiner made an express finding with respect to this limitation. The rejection of Claims 21-26 and 32-38 should be reversed.

5. Claims 6, 19 and 37:

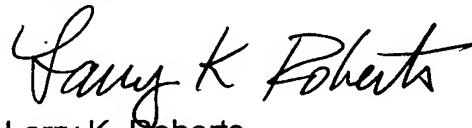
Claims 6, 19 and 37 have been rejected as being unpatentable over Soga in view of Ma and further “in view of Dietl et al (US 5,085,698).” This citation for Dietl is apparently incorrect. Dietl is not US 5,085,698; this is the patent number for Ma. Appellant will assume, for purposes of this appeal, that the Dietl reference is to U.S. 5,971,531, which is of record.

The Examiner asserts that it would have been obvious to replace the filter of Soga with a polyester mesh filter of Dietl. Even assuming arguendo that Soga is so modified, there is no allegation that Dietl supplies the teachings missing from Claims 1, 14 and 32 as discussed above, and so a prima facie case of obviousness has not been established. Dietl is not concerned with the use of pigmented ink in an inkjet printer, and so is not concerned with problems associated with use of pigmented ink.

VII. SUMMARY

The rejections under 35 USC § 103 must be reversed. A prima facie case of obviousness has not been made, and the cited references do not teach or suggest the claimed invention.

Respectfully submitted,

A handwritten signature in black ink that reads "Larry K. Roberts". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Larry K. Roberts
Registration No. 28,464

Dated: *9-9-2004*

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APPENDIX I

1. (Previously Presented) An ink reservoir adapted for holding a supply of pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, comprising:

- a containment vessel;
- a supply of pigmented liquid ink disposed in the containment vessel;
- a body of reservoir material disposed in the vessel;
- a fluid interconnect opening formed in the vessel;
- a screen disposed in the containment vessel and across the interconnect opening and in contact with the body of reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough.

2. (Original) The ink reservoir of claim 1, wherein the body of reservoir material forms a capillary storage member for storing ink within the reservoir under negative pressure.

3. (Original) The ink reservoir of claim 1, wherein the containment vessel has a bottom wall and a top wall, and wherein the fluid interconnect opening is disposed in the bottom wall, and a vent opening is formed in the top wall.

4. (Canceled)

5. (Original) The ink reservoir of claim 1, wherein the screen has a nominal pore size of 40 microns.

6. (Original) The ink reservoir of claim 1, wherein the screen is fabricated of a polyester mesh.

7. (Original) The ink reservoir of claim 1 further comprising a housing having a wall in which the interconnect opening is defined, and said screen is bonded to said wall in a peripheral region about the interconnect opening.

8. (Previously Presented) A method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between a fluid interconnect inlet port and the printhead, the method comprising:

providing the ink container with an interconnect outlet port, and with a body of reservoir material disposed in the container, the ink container further including a screen disposed across the interconnect outlet port and in contact with the reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough;

bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port;

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead.

9. (Previously Presented) The method of Claim 8, further comprising the step of providing a filter in the fluid interconnect at the fluid interconnect inlet port.

10. (Previously Presented) The method of Claim 8 further comprising: providing a fluid interconnect tower having at a distal end thereof the fluid interconnect inlet port, and

wherein the step of bringing the interconnect outlet port and the screen into contact with the fluid interconnect inlet port includes positioning the ink container against the fluid interconnect tower so that the screen contacts the distal end of the fluid interconnect tower.

11. (Original) The method of claim 10, wherein the step of providing a fluid interconnect tower includes positioning a filter at the distal end of the fluid interconnect tower.

12. (Original) The method of claim 8, wherein the step of providing a fluid interconnect tower includes positioning a filter at the distal end of the fluid interconnect tower.

13. (Original) The method of claim 8, wherein the screen pore size is selected to be large enough to keep the ink backpressure below a threshold backpressure during normal operating conditions.

14. (Previously Presented) An inkjet printing system, comprising:
an inkjet print cartridge comprising an inkjet printhead;
a replaceable ink container for holding a primary supply of pigmented liquid ink, the ink container comprising a containment vessel, a body of reservoir material disposed in the vessel, a fluid interconnect opening formed in the vessel, and a screen disposed in the containment vessel and across the interconnect opening and in contact with the body of reservoir material, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough;
a receiving station for mounting the print cartridge and the ink container;
a fluid interconnect structure for establishing a fluid path between the ink container and the print cartridge when the ink container and the print cartridge are installed in the receiving station, the fluid interconnect structure including an interconnect tower having at a distal end thereof a fluid interconnect inlet port, and wherein the fluid interconnect opening and the screen are brought into contact with the fluid interconnect inlet port when the ink container is installed in the receiving station.

15. (Original) The system of claim 14, wherein the body of reservoir material forms a capillary storage member for storing ink within the reservoir under negative pressure.

16. (Original) The system of claim 14, wherein the containment vessel has a bottom wall and a top wall, and wherein the fluid interconnect opening is disposed in the bottom wall, and a vent opening is formed in the top wall.

17. (Original) The system of claim 14, further comprising a supply of pigmented liquid ink disposed in the containment vessel.

18. (Original) The system of claim 14, wherein the screen has a nominal pore size of 40 microns.

19. (Original) The system of claim 14 wherein the screen is fabricated of a polyester mesh.

20. (Original) The system of claim 14 wherein the containment vessel comprises a wall in which the interconnect opening is defined, and said screen is bonded to said wall in a peripheral region about the interconnect opening.

21. (Previously Presented) A method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between the ink container and the printhead, the fluid interconnect having a fluid interconnect inlet port, the method comprising:

providing the ink container with an interconnect outlet port and with a body of reservoir material disposed in the container, the body of reservoir material having a region adjacent to and in contact with a screen disposed within the container and across the interconnect outlet port, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough;

bringing the screen into contact with the fluid interconnect inlet port, thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the fluid interconnect outlet port;

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead.

22. (Previously Presented) The method of Claim 21, further comprising the step of providing a filter in the fluid interconnect at the fluid interconnect inlet port.

23. (Previously Presented) The method of Claim 21, further comprising: providing a fluid interconnect tower having at a distal end thereof the fluid interconnect inlet port, and

wherein the step of bringing the screen into contact with the fluid interconnect inlet port includes positioning the ink container against the fluid interconnect tower so that the screen contacts the distal end of the fluid interconnect tower, thereby compressing the reservoir material and forming a region of increased capillarity adjacent the fluid interconnect.

24. (Previously Presented) The method of Claim 23, wherein the step of providing a fluid interconnect tower includes positioning a filter at the distal end of the fluid interconnect tower.

25. (Previously Presented) The method of Claim 21, further comprising: filling the ink container with a supply of liquid pigmented ink.

26. (Previously Presented) The method of Claim 21, wherein the screen pore size is selected to be large enough to keep the ink backpressure below a threshold backpressure during normal operating conditions.

27. (Previously Presented) A method for ink replenishment in an inkjet printing system employing pigmented ink, the ink comprising solid particles of colorant dispersed in a carrier fluid, the system including an inkjet printhead and a replaceable ink container, and a fluid interconnect providing an ink replenishment path between the ink container and the printhead, the fluid interconnect having a fluid interconnect inlet port, the method comprising:

providing the ink container with an interconnect outlet port, and with a body of reservoir material disposed in the container, the ink container further including an outlet screen disposed across the interconnect outlet port and in contact with the reservoir material, the outlet screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow said dispersed colorant particles to pass therethrough;

providing the fluid interconnect with an inlet screen disposed across the interconnect inlet port, the inlet screen having a pore size larger than the pore

size of the outlet screen and large enough to avoid clogging from dried ink pigments under typical use conditions;

bringing the outlet screen into contact with the fluid interconnect inlet port;
and

drawing ink stored in the container through the screen, the fluid interconnect and to the printhead.

28. (Previously Presented) The method of Claim 27, wherein the inlet screen has a nominal pore size at least twice as large as a nominal pore size of the outlet screen.

29. (Previously Presented) The method of Claim 27, wherein the inlet screen has a nominal pore size of at least 100 microns.

30. (Previously Presented) The method of Claim 27, wherein the inlet screen has a nominal pore size within a range from 100 microns to 200 microns.

31. (Previously Presented) The method of Claim 27, further comprising:
filling the ink container with a supply of liquid pigmented ink.

32. (Previously Presented) An ink supply system for an inkjet printing system with an inkjet print cartridge, comprising:

a replaceable ink container for holding a supply of pigmented liquid ink, the ink container comprising a containment vessel, the containment vessel having an interconnect opening;

a screen disposed in the containment vessel and across the interconnect opening, the screen having a pore size small enough to prevent air passage at operational pressures and large enough to allow dispersed colorant particles of the pigmented liquid ink to pass therethrough;

a body of reservoir material disposed in the containment vessel, the body of reservoir material having a region adjacent to and in contact with the screen;

a receiving station for mounting the ink container;

a fluid interconnect structure for establishing a fluid path from the ink container to the ink jet cartridge when the ink container is installed in the

receiving station, the fluid interconnect structure including an interconnect tower having a distal end with a fluid interconnect inlet port;

wherein when the ink container is installed in the receiving station, the fluid interconnect inlet port contacts the screen thereby compressing the region of the body of reservoir material adjacent to the screen and forming a region of increased capillarity adjacent the screen.

33. (Previously Presented) The system of Claim 32, wherein the body of reservoir material includes a capillary storage member for storing ink within the reservoir under negative pressure.

34. (Previously Presented) The system of Claim 32, wherein the containment vessel has a bottom wall and a top wall, and wherein the fluid interconnect opening is disposed in the bottom wall, and a vent opening is formed in the top wall.

35. (Previously Presented) The system of Claim 32, further comprising a supply of pigmented liquid ink disposed in the containment vessel.

36. (Previously Presented) The system of Claim 32, wherein the screen has a nominal pore size of 40 microns.

37. (Previously Presented) The system of Claim 32, wherein the screen is fabricated of a polyester mesh.

38. (Previously Presented) The system of Claim 32 wherein the containment vessel comprises a wall in which the interconnect opening is defined, and said screen is bonded to said wall in a peripheral region about the interconnect opening.